

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the above amendments and in light of the following discussion, is respectfully requested.

Claims 15-27 are pending in the application. Claims 15 and 18-21 are currently amended. Claims 22-27 are newly presented. Support for the amendment of Claims 15 and 18-21 can be found in the Specification as originally filed at paragraphs [0046] and [0051], for example. Support for new Claim 22 can be found in Figure 3, for example. Support for new Claim 23 can be found in the Specification as originally filed at paragraph [0028], for example. Support for new Claim 24 can be found in the Specification as originally filed at paragraph [0051], for example. Support for new Claims 25 and 26 can be found in the Specification as originally filed at paragraph [0052], for example. Support for new Claim 27 can be found in Figure 5, for example. No new matter is introduced.

In the Office Action, the specification was objected to for an informality. Claims 15-21 were rejected under 35 U.S.C. §102(b) as anticipated by Downs (U.S. Patent No. 5,951,431).

With respect to the objection to the specification, paragraphs [0025], [0043], and [0045] are amended to recite an opening 120h that is *basically elliptical* in shape.¹ Accordingly, it is respectfully requested that the objection to the specification be withdrawn.

Amended independent Claim 15 recites a differential gear unit including a casing that defines an internal space and an opening communicated with the internal space. Amended Claim 15 recites that the fatigue life of the casing is adjusted by making a shape of the opening asymmetrical with respect to the longitudinal rotational axis of the casing. Amended Claim 15 further recites that the opening is in a basically elliptical shape having a round shape at each of the corner portions, such that the round shapes of adjacent corner portions

¹ The Applicants note that though the Specification has been amended, the recited claims are directed towards the embodiments illustrated in Figures 1 and 12, for example.

are different from each other. Furthermore, *a portion at which the fatigue life of the casing is increased is a first corner portion* at which a tensile strength is generated when the driving force is input in a rotational direction. Amended Claim 15 also recites that the first corner portion is a heat treated corner portion.

As noted in the Specification as originally filed, the Applicants recognized that a casing that includes a corner portion at which fatigue life is increased presents several advantages over conventional arrangements. For example, the fatigue life of the casing caused by rotating in the frequently used direction can be increased.² Also for example, the differential gear is not increased in size and weight compared to uniformly strengthening the case.³

Turning to the applied reference, Figures 3 and 4 of Downs illustrate a differential case 112 including a pair of assembly windows 122a and 122b.⁴ As can be seen in Figures 3 and 4 of Downs, assembly windows 122a and 122b are contoured to be reverse mirror-imaged, each having a pair of opposed circular edge portions 152 interconnected by a pair of opposed elongated edge portions 154.⁵ However, Downs does not suggest or disclose a *first corner portion* that is a portion of the casing that the fatigue life of the casing is increased.

Moreover, the Office Action asserts that the feature of the first corner portion being a heat treated corner portion should not be given patentable weight as it is a product-by-process. M.P.E.P. §2113 states “the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is *the same as or obvious from a product of the prior art*, the claim is unpatentable even though the prior product was made

² See, the Specification as originally file at par. [0006].

³ Id.

⁴ See, Downs at col. 3, ll. 6-8.

⁵ See, Downs at col. 3, ll. 29-32.

by a different process.”⁶ However, the product recited in amended independent Claim 15 is not the *same as or obvious from* the product recited by Downs.

Amended independent Claim 15 recites a casing whose fatigue life is adjusted by making a shape of the opening asymmetrical and also adjusted by heat treatment.. By comparison, Downs is silent regarding *increasing* a fatigue life at a localized portion of the case by any means, much less by adjusting a shape of the opening and heat treatment. Accordingly, the product recited in amended Claim 15 is not the same or obvious as the product recited by Downs. Therefore, Downs does not suggest or disclose all the features of amended independent Claim 15.

Based on the foregoing, amended independent Claim 15 is believed to be in condition for allowance. Dependent Claims 16-21 are believed to be allowable for at least the same reasons as amended independent Claim 15 from which they depend. Furthermore, dependent Claims 16-21 recite additional features not suggested or disclosed by the cited reference.

New dependent Claims 22-27 are believed to be allowable for at least the same reasons as amended independent Claim 15 from which they depend. Furthermore, dependent Claims 22-27 recite additional features not suggested or disclosed by the cited reference.

For example, new dependent Claim 22 recites that the opening includes a straight portion that is located closest to an output portion, such that the straight portion is perpendicular to a longitudinal rotational axis of the differential gear casing. By comparison, Figures 3 and 6 of Downs illustrate an assembly window 122a such that the portion of the assembly window closest to tubular hub 40 is not perpendicular to a longitudinal rotational axis illustrated by line 7-7.⁷ Accordingly, Downs does not suggest or disclose all of the features of new dependent Claim 22.

⁶ *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985), emphasis added.

⁷ See, Downs at col. 1, ll. 39-41 and col. 2, line 55.

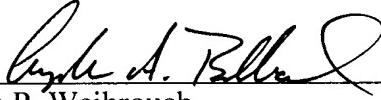
Furthermore, new dependent Claim 27 recites a first and second opening. Dependent Claim 27 also recites the support member includes a first hole, such that a circumferential distance around the casing between the first opening and the first hole is greater than a circumferential distance between the second opening and the first hole. As can be seen by Figure 5 of Downs, the mirror-image assembly windows 122a and 122b are equidistant from aperture 20. Accordingly, Downs does not suggest or disclose all of the features of new dependent Claim 27.

For the reasons discussed above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a notice of allowance for Claims 15-27 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better condition for allowance, the Examiner is encouraged to contact the Applicants' undersigned representative at the below-listed telephone number.

Respectfully submitted,

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